

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of

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Serial No. 09/842,028

Filed: April 26, 2001

For: SPLIT GRIP CONTROL LEVER FOR HEAVY MACHINERY

Atty. Ref.: 3638-10

Group: 3682

Examiner: C. Kim

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May 5, 2003

Mail Stop Appeal Brief - Patents  
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P.O. Box 1450  
Alexandria, VA 22313-1450

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**APPEAL BRIEF**

Sir:

Applicant hereby appeals the Final Rejection of December 3, 2002, Paper No. 5.

**REAL PARTY IN INTEREST**

The real party in interest is JLG Industries, Inc.

**RELATED APPEALS AND INTERFERENCES**

The Appellant, the undersigned, and the assignee are not aware of any related appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

**STATUS OF CLAIMS**

Claims 1-4 and 7-19 are present in this application, all claims having been rejected and are appealed herein. No claims have been substantively allowed.

## STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Final Rejection mailed December 3, 2002.

## SUMMARY OF INVENTION

The invention relates to a control lever including a fixed grip portion to help support an operator while driving or maneuvering heavy machinery, while reducing the potential for inadvertent motion of the control lever during operation. With reference to Fig. 1, a split grip control lever 10 of the invention includes a fixed base portion 12 that is fixedly securable to a surface 14 such as a machine frame, control panel or the like, and a movable upper portion 16 defining a control portion of the lever that is movable relative to the fixed base portion 12. The movable upper portion 16 and the fixed base portion 12 are essentially contiguous but separated by a split line 18. With this construction, the movable upper portion 16 and the fixed base portion 12 together define a substantially continuous profile as shown in Fig. 1. See the specification at, for example, page 3, paragraph [0016].

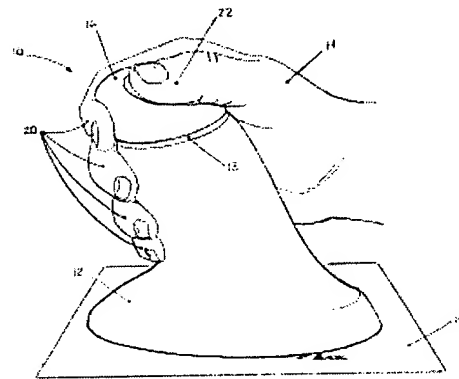
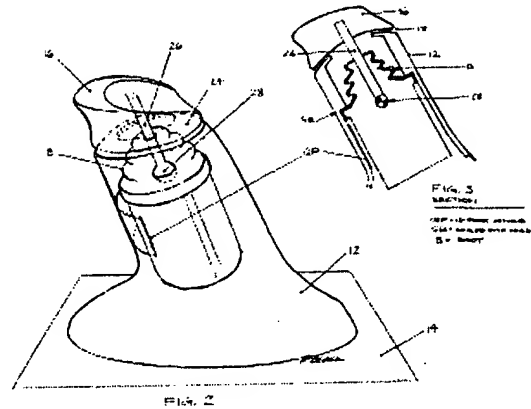


FIG. 1

The continuous profile is preferably shaped to fit a user's hand H and includes finger grip portions 20 and a thumb grip portion 22. As shown, the movable upper portion 16 is disposed relative to the fixed base portion 12 and is sized for manipulation by an operator's thumb and index finger, while the fixed base portion 12 is disposed relative to the movable upper portion 16 and is sized to support the operator's hand. See, for example, page 4, paragraph [0017].

Any suitable multi-position pivoting control switch, such as an electromechanical or optical control switch, can be implemented into the split grip control lever of the present invention. According to the invention, a control device 24 is preferably positioned within the fixed base portion 12 as shown in Fig. 2, and the movable upper portion 16 includes a control shaft 26 coupled with the control device 24 at a substantially central position relative to the le



ver profile such that a pivot point 28 of the control shaft 26 is centrally disposed relative to the lever profile. Such positioning allows for a short control shaft 26 which pivots at or near the center of the unit. By this arrangement, finite control of the equipment is readily effected. See, for example, page 4, paragraph [0019]. The control device 24 also includes a boot 30 that protects the control device components in a sealed bulkhead 32 that helps secure the control device 24 and seal the boot 30.

With the construction of the split grip control lever of the invention, the ergonomic shape of the lever as it relates to various hand sizes, right and left hand specific orientation, etc., contributes to the effectiveness of the design. The arrangement invites the operator's hand to a relaxed position and allows for full movement of the controls with minimal stress or fatigue to the hand. As a consequence, the overall feel of the control is optimized while enabling an operator to avoid inadvertent movement and actuation of machine components by grasping the fixed base portion.

### ISSUES

- I. Whether claims 1-4, 7-9 and 18 are unpatentable under 35 U.S.C. §102(b) over U.S. Patent No. 5,577,417 to Fournier.
- II. Whether claims 10-13 and 19 are unpatentable under 35 U.S.C. §102(b) over Fournier.
- III. Whether claim 14 is unpatentable under 35 U.S.C. §102(e) over U.S. Patent No. 6,152,676 to Evert et al.
- IV. Whether claims 14-17 are unpatentable under 35 U.S.C. §102(b) over U.S. Patent No. 5,350,891 to Ditzig.

### GROUPING OF CLAIMS

All of the claims are independently patentably distinct from one another for the reasons set forth in the Argument section below, except that claims 2-4, 7-9 and 18 stand or fall with claim 1, claims 11-13 and 19 stand or fall with claim 10, and claims 15-17 stand or fall with claim 14.

### ARGUMENT

- I. Claims 1-4, 7-9 and 18 are not unpatentable under 35 U.S.C. §102(b) over Fournier.

Under 35 U.S.C. §102(b), anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. See, for example, *Akzo N.V. v. USITC*, 1 USPQ2d 1241 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909 (1987). An important object of the present invention is to provide a control lever wherein inadvertent motion caused by inertia shifts in the operator's environment can be substantially eliminated. The control lever includes a fixed base portion that enables the operator to resist the effects of external forces. The Fournier patent is unrelated to such an object,

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and as a consequence, the structure described therein does not meet the features of the claimed invention.

The Office Action contends that Fournier discloses "a fixed base portion 12." To the contrary, however, Fournier in fact requires that its handle 10 be entirely infinitely movable. In the embodiment illustrated in Figure 2, the handle 10 is attached to an end of a flexible cord 22, and in the embodiment illustrated in Figure 4, the handle 10 is secured to an articulated arm system 52. Fournier specifically describes that "the active part of the handle may either only be connected to the support by a flexible cord in which pass the movement transmission means, or mechanically connected to the support by an articulated arm along which can pass the movement transmission means." Column 3, lines 6-10. Moreover, the handle 10 in Fournier is provided with an active part on which acts the hand of the operator as well as one or two tactile and/or kinesthetic information return parts. In order to effect the specific functionality described in the Fournier patent, the active part 12 (referred to as a "fixed base portion" in the Office Action) is neither fixed nor fixable, as such a construction would render the apparatus inoperative for its intended purpose.

Claim 1 recites that the movable upper portion and the fixed base portion define means for an operator to resist effects of external forces via one hand while maintaining control of the movable upper portion with said one hand. Since this structure is lacking in the Fournier patent, Appellant respectfully submits that the rejection is misplaced.

In paragraph 6 of the Office Action, the Office Action contends that the "fixed base portion 12" in Fournier meets the feature of the claimed invention, referring to a dictionary definition of the term "fixed." The dictionary definition referenced in the

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Office Action defines "fixed" as "securely placed or fastened." It is of course well settled that a patent applicant is entitled to be his own lexicographer. See, e.g., *United States v. Telectronics, Inc.*, 8 USPQ 2d 1217, 1220 (Fed. Cir. 1988), *cert. denied*, 490 U.S. 1046 (1989)("Patent law allows the inventor to be his own lexicographer. . . . [T]he specification aids in ascertaining the scope and meaning of the language employed in the claims inasmuch as words must be used in the same way in both the claims and the specification.") Claim terms are interpreted in this context with reference to the specification. In *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 42 USPQ 2d 1737, 1741 (Fed. Cir. 1997), the Federal Circuit held that "the specification, of which the claims are part, teaches about the problems solved by the claimed invention, the way the claimed invention solves those problems, and the prior art that relates to the invention. These teachings provide valuable context for the meaning of the claim language."

As described in the specification, the "fixed base portion" of the invention is fixed in a manner that enables the operator to resist the effects of external forces. Such forces including the inertia forces associated with motion and operation of heavy machine. The Appellant does not contend that the term "fixed" is being used in a manner inconsistent with its dictionary definition; rather, the term "fixed" in the context of the present invention is fixed or "securely placed or fastened" in the manner that would enable an operator to resist forces caused by movements of the heavy machinery, i.e., immovable to an extent to aid the operator in effectively resisting forces caused by movement of the machine. This is consistent with the description, consecutively describing a fixed base portion and a movable upper portion (see, e.g., paragraph [0016]). Appellant respectfully

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submits that the Office Action applies the dictionary definition of "fixed" entirely out of context with the disclosure of the present invention.

As noted, claim 1 further exemplifies the use and meaning of the terms by specifically reciting that the "movable upper portion and the fixed base portion define means for an operator to resist effects of external forces via one hand while maintaining control of the movable upper portion with said one hand." This specifically claimed feature in claim 1 is disregarded by the Examiner's misplaced characterization of the term "fixed."

Moreover, with respect to this specific recitation, the Office Action contends that "[I]t is inherent in nature that the external forces can be created in myriad ways [sic] and such grip control devices of Fournier . . . are designed so that at least some of the external forces can be resisted. If all of the grip control levers as shown by Fournier . . . can not even resist at least one of the effects of external forces, then the grip control levers would fail to perform their functionalities, mainly the controlling of their machines." This again is a clear mischaracterization of the terms used in the claims as well as an inaccurate representation of the Fournier patent. As noted, Fournier requires that its handle 10 be entirely infinitely movable and can in no way enable the operator to resist effects of external forces. For this reason also, Appellant respectfully submits that the rejection is misplaced.

With respect to the dependent claims, Appellant submits that these claims are allowable at least by virtue of their dependency on an allowable independent claim.

**II. Claims 10-13 and 19 are not unpatentable under 35 U.S.C. §102(b) over Fournier.**

Claim 10 defines structure similar to that discussed above with respect to claim 1. In a similar manner, Appellant respectfully submits that the Fournier patent lacks at least the claimed fixed base portion fixedly securable to a surface of the machinery. As noted above, if the active part 12 in the Fournier patent (referred to as a "fixed base portion" in the Office Action) were in fact fixed or fixable to a surface of machinery, the Fournier apparatus would be rendered inoperative for its intended purpose. Additionally, claim 10 recites that the fixed base portion and the control portion define means for an operator to resist effects of external forces via one hand while maintaining control of the control portion with the same hand. This structure is also lacking in Fournier as discussed above in the context of claim 1. Appellant respectfully submits that dependent claims 11-13 and 19 are also allowable at least by virtue of their dependency on an allowable independent claim.

**III. Claim 14 is not unpatentable under 35 U.S.C. §102(e) over Evert.**

The Office Action contends that Evert discloses "a fixed base portion 11 fixedly secured to the machine frame 1." To the contrary, however, Evert describes that the lever 11 can be pivoted around a first axis 12 that extends substantially in a transverse or lateral direction of the industrial truck . . . to control the vertical movement of the load holding device 5. See, column 4, lines 1-5. Since at least this feature of the invention is lacking in the Evert patent, Appellant submits that the rejection is misplaced.

Additionally, claim 14 recites that the fixed base portion provides support for an operator to resist effects of external movements resulting from movements of the



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machine. Since the lever 11 in Evert is pivotable about the axis 12, the lever 11 is incapable of providing any such support. As a consequence, the structure of the Evert patent can be distinguished from the present invention.

In paragraph 8 of the Office Action, the Examiner reiterates the mischaracterized use of the term "fixed" as defined according to the present invention. Indeed, Appellant respectfully submits that those of ordinary skill in the art would readily understand "fixed" in the context of the present invention to mean immovable to an extent to aid the operator in effectively resisting forces caused by movement of the machine. In fact, as further support for the Appellant's use of the term "fixed," a control lever of the type disclosed in Evert is specifically addressed and distinguished in the Background section of the present specification. In particular, the specification describes that "current designs force the operator to grasp a control lever that pivots at or near the base of the hand (as in the Evert patent). These designs do not offer adequate fixed support for the operator and may cause sudden inadvertent movement of the equipment." See, page 1, paragraph [0006]. The Office Action again takes the term "fixed" out of context of the present invention and should rather read the term in light of the present specification.

Withdrawal of the rejection is thus respectfully requested.

#### **IV. Claims 14-17 are not unpatentable under 35 U.S.C. §102(b) over Ditzig.**

Ditzig discloses a wobble stick control switch assembly for operating remotely adjusted vehicle outside rear-view mirrors. It is clear from the description and drawings that only the stick 120 and knob 122 and perhaps the top surface of the housing shell 116 would be exposed to the operator. As a consequence, the Ditzig patent lacks at least structure that provides support for an operator to resist effects of external movements

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resulting from movement of a machine. Indeed, the housing shell 116 is not even remotely adapted for gripping due in part to the presence of apparently sharp exterior edges. Moreover, the knob 122, stick 120 and housing shell 116 can hardly be said to define a substantially continuous profile as claimed.

In paragraph 9 of the Office Action, the Examiner maintains that "the movable upper portion and the fixed base portion [of Ditzig] define a substantially continuous profile," referring again to a dictionary definition of the term "profile" or "continuous" taken out of the context of the present invention. The specification describes that the movable upper portion 16 and the fixed base portion 12 are essentially contiguous but separated by a split line 18. The specification further provides that with this construction, the movable upper portion 16 of the fixed base portion 12 together define a substantially continuous profile as shown in Fig. 1. See, for example, page 3, paragraph [0016].

Appellant submits that the claim term meanings would thus be readily apparent to those of ordinary skill in the art in light of the specification. The Office Action takes the terms used in the claims out of context to support its misplaced grounds of rejection.

With respect to dependent claims 15-17, Appellant submits that these claims are allowable at least by virtue of their dependency on an allowable independent claim.

Withdrawal of the rejection is respectfully requested.

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**CONCLUSION**

In conclusion it is believed that the application is in clear condition for allowance; therefore, early reversal of the Final Rejection and passage of the subject application to issue are earnestly solicited.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: Alan M. Kagen  
Alan M. Kagen  
Reg. No. 36,178

AMK:jls  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100

**APPENDIX**  
**CLAIMS ON APPEAL**

1. A split grip control lever comprising:  
a fixed base portion; and  
a movable upper portion that is separately pivotable relative to the fixed base portion, wherein the movable upper portion and the fixed base portion define a substantially continuous profile, and wherein the movable upper portion and the fixed base portion define means for an operator to resist effects of external forces via one hand while maintaining control of the movable upper portion with said one hand.
2. A split grip control lever according to claim 1, further comprising a control device positioned within the fixed base portion, wherein the movable upper portion comprises a control shaft coupled with the control device.
3. A split grip control lever according to claim 2, wherein the control device is disposed at a substantially central position relative to the substantially continuous profile such that a pivot point of the control shaft is centrally disposed relative to the substantially continuous profile.
4. A split grip control lever according to claim 2, wherein the fixed base portion is fixedly securable to a surface, and wherein the control device is disposed at a position spaced from the surface at a substantially central position relative to the substantially continuous profile.
7. A split grip control lever according to claim 1, wherein the substantially continuous profile is shaped to fit a operator's hand.

8. A split grip control lever according to claim 7, wherein the substantially continuous profile is shaped to fit one of a operator's right hand or left hand.

9. A split grip control lever according to claim 1, wherein the movable upper portion is disposed relative to the fixed base portion and sized for manipulation by a operator's thumb and index finger, and wherein the fixed base portion is disposed relative to the movable upper portion and sized to support the operator's hand.

10. A control lever for machinery comprising:

a fixed based portion fixedly securable to a surface of the machinery; and

a control portion disposed adjacent the fixed base portion and movable relative to the fixed base portion, the control portion being separated from the fixed base portion via a split line and being contiguous with the fixed base portion to define a substantially continuous profile, wherein the fixed base portion and the control portion define means for an operator to resist effects of external forces via one hand while maintaining control of the control portion with said one hand.

11. A control lever according to claim 10, further comprising a control device positioned within the fixed base portion, wherein the control portion comprises a control shaft coupled with the control device.

12. A control lever according to claim 11, wherein the control device is disposed at a substantially central position relative to the lever profile such that a pivot point of the control shaft is centrally disposed relative to the lever profile.

13. A control lever according to claim 11, wherein the fixed base portion is fixedly securable to a surface, and wherein the control device is disposed at a position spaced from the surface at a substantially central position relative to the lever profile.

14. A machine comprising:

a machine frame supporting at least one movable element; and

a control lever secured to the machine frame, the control lever comprising:

a fixed base portion fixedly secured to the machine frame, the fixed base portion providing support for an operator to resist effects of external movements resulting from movement of the machine, and

a movable upper portion that is separately pivotable relative to the fixed base portion for controlling movement of the at least one movable element, wherein the movable upper portion and the fixed base portion define a substantially continuous profile.

15. A machine according to claim 14, wherein the control lever further comprises a control device positioned within the fixed base portion, and wherein the movable upper portion comprises a control shaft coupled with the control device.

16. A machine according to claim 15, wherein the control device is disposed at a substantially central position relative to the lever profile such that a pivot point of the control shaft is centrally disposed relative to the lever profile.

17. A machine according to claim 15, wherein the control device is disposed at a position spaced from the machine frame at a substantially central position relative to the lever profile.

18. A split grip control lever according to claim 1, wherein the movable upper portion and the fixed base portion define an ergonomic profile.

19. A control lever according to claim 10, wherein the control portion and the fixed base portion define an ergonomic profile.